

could only be prevented by making use of the expensive material, copper; and the difficulty, when compared with wood, of repairing any damages, as a wooden roof could at any time be set to rights by the common carpenter. These different items formed in my mind so many objections to its use, and the same disadvantages soon became generally apparent. It was now thought advisable by some persons, that in order to obviate the many disadvantages in the use of metal, the rafters and framework of the eaves ought to be made of wood, and the eavestuffs of metal. The plan certainly presented more advantages than the other, yet it was quite obvious that materials so incongruous could never give satisfaction; and accordingly, in a few years, as I had anticipated, the rage for these structures gradually subsided, and the use of wood again became resorted to by most persons as the best material for horticultural purposes. In the construction of glass houses requiring much light there always appeared to me one important objection, which no person seemed to have taken up or observed. It was this:—To plain lean-to, or shed roof, the morning and evening sun, which is the chief source of the greatest importance to forcing fruit, presented its direct rays at a low angle, and consequently very obliquely to the glass. At these periods most of the rays of light and heat were obstructed by the position of the glass and heavy rafters, so that a considerable portion of time was lost both morning and evening: it consequently became evident that a system by which the glass would be more at right angles to the morning and evening rays of the sun would obviate the difficulty and remove the obstruction to rays of light entering the house at an early and late hour of the day. This led me to the adoption of the Ridge and Furrow principle for glass roofs, which places the glass in such a position that the rays of light in the mornings and evenings enter the house without obstruction, and present themselves more perpendicularly to the glass at those times when they are the most powerful; whereas, at mid-day, when they are most powerful, they present themselves more obliquely to the glass. He concluded by saying:—When I consider the cheapness of glass and cast iron, and the great facility with which they can be used, I have no doubt but many structures similar to that at Darley will be attached to dwelling-houses, where they may serve as sitting-rooms, conservatories, waiting-rooms, or omnibus-rooms. If I may be allowed the expression, I did now, in fact, engage in making the design for a gentleman's house to be covered wholly with glass; and when we consider that wherever lead is now used glass may with equal propriety be substituted, I have every hope that it will be used for buildings of various conditions and characters. Structures of this kind are also susceptible of the highest kind of ornamentation in stained glass and gilding painting. I am not without hope, however, that it will become almost universal in its use, and that the system will be extended for manufacturing purposes, as well as general domestic and also horticultural buildings, so that even market gardeners will advantageously apply it to the growing of foreign fruit for the London market. I ever go so far as to indulge in the sanguine hope that agriculture will be ultimately benefited by the application of cast iron and glass. In short, there is no limit to the uses to which it may be applied—no foresight can define the limits where it will end; and we may congratulate ourselves that in the nineteenth century the progress of science and the spirit of manufacturing have placed at our disposal the application of materials which were unknown to the ancients, and thereby enabled us to erect such structures as would have been deemed impossible, even in the early part of the present century.

NOTES IN THE PROVINCES.

THE clock-turret on the Guildhall of Norwich is now completed, and Mr. Kett, the architect, has been further commissioned to restore the council-chamber of that city, the open timber roof of which has been hitherto concealed by a flat plaster ceiling. A company has been formed for the establishment of a corn exchange at St. Neot's. A correspondent of the *Suffolk Times* complains that while the Vicar of Houlston has been praiseworthy engaged in restoring the parish church, a work now nearly completed, the Bishop of Ripon has ordered the destruction of the abbey residence adjoining, although they were capable of standing for other four hundred years, or as long as they have yet stood since their foundation. A new church had been commenced at Deal. Not many weeks ago there was a grand fancy bazaar in Worcester, at which many of "Worcestershire's brightest belles" presided at the stalls with such success, as to procure a large sum of money towards the improvements in front of All Saints' Church there. Designs

have since been submitted to the committee, and those by Mr. Truefit have been accepted. The contract for North Malvern church has been taken by Mr. Haines, builder. The roof is expected to be put on by Christmas, and the church to be ready for consecration by next July. Mr. and Miss Morrie have contributed in all not less than 1,000*l.* towards the building and endowment. A new church is to be erected in St. Luke's district, Bristol, 5,000*l.* have been already subscribed. The first stone of a new church to replace the old church of London has been laid by Mrs. Davies, of Chesham. Lord Bateman constitutes the ground. The new fabric will be raised on the foundations of the old church, after a design by Mr. Cranston, of Hereford, and like the structure which it replaces, will be built in the Early English style. The old church, though humble in appearance, boasted of very considerable antiquity. It was founded, probably soon after the Conquest, by the Wigwores, of London. The new church of St. Paul's, Ramothbottom, built by subscription, in the Early English style, for 2,500*l.* has been consecrated by the Bishop of Manchester. Clifton Church, says the *Cumberland Post*, has been re-opened. The seats are all open: the wood (oak) was given by the Earl of Lonsdale, and the workmanship executed by public subscription. The church has been entirely rebuilt, at the expense of Mr. Wm. Brougham, and is completed in the cathedral style. There is a window of stained glass at the east end. Christ Church, Penrith, was consecrated on the 31st ult. The building is in the Perpendicular style, with walls of red sandstone. The roof ridges are covered with ornamental tiles of terra-cotta. The plan comprises a nave with north and south aisles, a chancel also with north and south aisles, a vestry at the north-east end, and a south porch. The nave is divided from its aisles by an arcade of four arches, built of white polished freestone. Two arches of same character divide the chancel from its aisles. The chancel is separated from the nave and surrounding aisles by moulded screens. The sittings, which mostly face towards the east, are provided in open benches. The roof-timbers are open, wrought, and moulded. The font is of stone, a gift of the contractor, Mr. Mewman. The windows of nave and chancel are of two and three lights, the east of chancel five, and filled with stained glass. The two windows of the south aisle of chancel were presented, one by the architect, Messrs. Travis and Mangnall, and the other by Messrs. Scott and Green, contractors for the carpenter-work and plastering. There are no galleries. The church will seat between 600 and 700, mostly free. Heating and ventilating apparatus have been fitted up. The total cost of erection was about 2,500*l.*: of this sum 500*l.* were bequeathed by the late Mrs. de Whelpdale. Adjoining the church is a consecrated churchyard. A new bridge at Lancaster is about to be made in place of the old bridge, swept away some time ago by a flood. The Government engineer suggests either a girder or a suspension bridge. Cost of former, 16,000*l.*; of latter, 13,000*l.* or 14,000*l.* The Chancellor of Exchequer prefers the former, and offers to make a free grant of half the amount for its erection, and to advance the other half, making it a permanent charge on the county and the Commissioners of Highland Roads and Bridges.

CLUB-HOUSE FOR LITERARY AND SCIENTIFIC BODIES.

In your last number a correspondent puts forth some very good ideas respecting the better lodgement of our literary and other societies. Suffer me to add a few further thoughts on the same subject.

It is a very evident fact that a beautiful building goes a long way in the adornment of a society with the character of respectability and importance, and although it may not be entirely just to judge of a body of men by the appearance of the edifice in which they assemble, yet such judgment is, without doubt, frequently made, and it must necessarily tell largely against not a few of our literary, scientific, and artistic societies. Even the Institute of British Architects is exposed to the disadvantages of this mode of judgment, for it is housed uncomfortably and unarchitecturally lodged, while, from its very nature, and the occupation of its members, it ought, of all other associations, to be the best provided for in this particular, and the best calculated to stand

such a test of respectability as we have noticed. Weighed in this balance it will, however, be found sadly wanting, and it is a very sad sight to see a body of architects carrying on the business of their society in such unsuitable and uncomfortable apartments as are those occupied at No. 16, Grosvenor-street. Any royal institute would, in these rooms, have a beggarly look; but to find a set of gentlemen, known to the world as a royal assembly of house designers and beauty creators, taking up their abode, holding their *conferences*, and reading their papers in such quarters, does not greatly redound to their honour. Why, such an association of men ought to possess a model building: their meeting-room, instead of being small, ugly, and uncomfortable, should be arranged on the best principles of acoustics, warmed, ventilated, and lighted in the most perfect manner; of sufficient size to accommodate not only its members, but a reasonable allowance of visitors, and which, should be decorated and beautified in such a style, and with so artist-like an effort, as to afford some evidence of the amount of congregated talent. The rest of the apartments should be partakers of the beauty and comfort displayed in the lecture-hall, and, moreover, the exterior of the structure should sympathize with the interior, and be to the possession of such a fulsome architectural character and artistic effect as to cause it to proclaim the talents, and at the same time extend the fame, of Britain's architects. It should speak its purpose, and be an ornament to the neighbourhood, the city, the country, yes, even to the world.

Another thought strikes me: A. D. S. suggests the formation of clubs and the erection of club-houses, to be jointly occupied by three or four societies. Such an arrangement would, I imagine, be as feasible and profitable as it is desirable: it would, however, be extremely important to manage so to congregate the several societies as to place under one roof such as are most in harmony, and who, working towards an end somewhat similar, could help one another, and thus accelerate their mutual progression in the paths of information and knowledge. To give an illustration of my meaning,—would it not be a desirable thing if we could club together so institute of architects, a society of painters, an association of sculptors (yes, there one), and an archaeological institute? Such an accumulation would assuredly prove mutually useful. The three fraternal are closely bound together by their love for beauty and their desire to present to the world some of its many appearances: they have been denominated sister arts, and right worthily figured forth as three graces. Archaeology—not the science of mere collecting, not the art of euhemering the mere corporeal dust of bygone times and past deeds, but the veritable and the useful archaeology—is it not a good neighbour for the arts? cannot it often be made subservient to the wants alike of painter, sculptor, and architect, by giving them an insight into ancient manners and customs, and by bringing in the light of modern times, the many beautiful forms and graceful proportions made use of by the artist minds of antiquity? Now, just a word or two as to the building in which these four should reside: it is impossible to give anything besides hints as to its arrangement: to do more would require the pencil, not the pen. I am, I confess, rather disposed to find fault with the opinions of "A. D. S." on this part of the matter, as I cannot but consider that the disposition of plan proposed by him would neither possess grandeur nor would it conduce to comfort and independence.

Now, supposing the edifice to be a square or a parallelogram, I would place at each angle a hall surrounded by library, committee-room, and other necessary accompaniments. To these halls there should be separate entrances, so as to allow each society to have any requisite amount of privacy and independence it might wish. In the centre of the structure there could be advantageously planned a hall of sufficient magnitude to permit of general meetings, so that when papers were to be read or business transacted affecting the interests, and good of all, they might combine and get instruction, or promote the welfare of the club in a united manner.

To bring these desultory and immature thoughts to a conclusion, what an acquisition would it be to the effective architecture of our age and country, if not only literary societies, but also mercantile and professional families and tradesmen, were to carry out the club system! How it would change the panoramic view of this world's metropolis! Instead of an outline unmercifully mangled by dirt and trifling breaks, we should have one grand and imposing: in the place of being surrounded by a host of misshapen and ugly chips of the Building Act, we should be encompassed by structures, not so numerous truly, but infinitely more magnificent in extent, and many of them doubtless arranged in sublimity and picturesqueness: littleness would give way to greatness; meanness be detroned by nobility and grandeur. Such edifices would be worthy of the nineteenth century, honourable in modern art, and would shed an undying and ever-lustrous ray of beauty and glory around the times and the throne of a Victoria. J. N.